

Force optical port on switch



Overview

How to easily assess Optical Received Power on all Force10 PortsThe following article describes how to quickly and easily assess the optical receive power.

Key Takeaways

You can force an optical port to come up by manually configuring its link state, speed, duplex mode, and interface type, using either CLI commands or the switch's management interface.**Forced Port Link-Up**

Some switches allow forcing a port link-up even if the RX fiber is not connected, which is useful for unidirectional traffic or security purposes. On platforms supporting this feature (e.g., NetVisor OS 7.0+), you can use the CLI command:

```
port-force-linkup-add
```

- Specify the port number(s) to force link-up.
- Default is TX side; RX can also be specified if needed.
- This disables fault detection on the TX port and allows the RX port on the peer switch to come up.
- Forced link-up settings persist across reboots.
- To remove forced link-up, use:

```
port-force-linkup-remove port-id
```

This ensures the port remains operational even without a full duplex connection or auto-negotiation success .

Optical Interface Configuration

Optical ports often have fixed duplex mode (full duplex) and may not support simultaneous gigabit and full-duplex settings. To configure an optical port:

- Enter layer-2 interface configuration mode.
- Set the speed (e.g., 100M, 1G) using the interface command.
- Set duplex mode to full:

`duplex full`

- Configure flow control if needed:

`flow-control on`

or

`flow-control auto`

- Auto mode sends flow control frames only when negotiation succeeds.
- Electrical interfaces may support auto-negotiation, but optical interfaces typically require manual configuration .

Combo Interface Considerations

For switches with combo interfaces (one electrical and one optical port sharing the same interface):

- Only one interface can be active at a time.
- If an optical module is installed, the interface will operate in fiber mode after a reboot.
- Configure the interface attributes (speed, duplex) in the same interface view regardless of whether electrical or optical mode is active.
- Ensure the remote interface type matches the local interface mode; otherwise, communication will fail .

Verification

After configuration, verify the port and optical module status:

- Check link state, transmit/receive optical power, and temperature.
- Confirm module identification and compatibility.

- On Extreme switches, commands like show port or DDM diagnostics provide real-time operational data .

Summary

To force an optical port configuration:

- Use forced link-up commands if RX/TX is partially connected or auto-negotiation fails.
- Manually set speed and duplex for optical interfaces.
- For combo ports, ensure the correct interface mode is selected and matches the remote device.
- Verify the port status and module diagnostics to confirm proper operation. This approach ensures reliable optical connectivity even in non-standard or security-sensitive deployments.

Article Content

How to easily assess Optical Received Power on all Force10 Ports

The following article describes how to quickly and easily assess the optical receive power from any transceiver

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Position the SFP or SFP+ so it is in the correct position. (The optic has a key that prevents it from being

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By reading internal parameters of optical transceivers on switches, users can monitor link status, real-time

Configuring Forced Port Link-up

Port speed of 1, 10, 25, 40, or 100 Gbps. Optical LC cable type Any optical transceiver (QSFP and SFP) with an LC connector You

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An all-optical Ethernet switch is a network switch whose service ports are entirely optical, meaning every interface

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I have a switch with all four 10g optical links on a port channel showing -40.0 dBm Optical Receive Power. I believe

Cisco SFP Commands Cheat Sheet: Check Status & Troubleshoot

Learn how to check SFP module health on Cisco switches. This guide covers essential CLI commands (show inventory, DOM), fixes

View the Optical Module Status on a Switch

This article provides instructions on how to view the Optical Module Status on your switch.

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

